

## EXECUTIVE SUMMARY

The open front barricade (OFB) and the enclosed barricade (EB) are designed to defeat the primary fragments of selected ordnance at Ordnance Explosive (OE) removal sites. The OFB and the EB are intended to be used as engineering controls during intrusive operations to defeat primary fragments due to an accidental/unintentional detonation. Since the OFB is open at the front, it defeats primary fragments in three directions while the EB is fully enclosed and defeats primary fragments in all directions. The OFB and the EB are not designed for use as engineering controls for an intentional detonation. The OFB and the EB are not designed to mitigate effects from blast overpressure and noise. The OFB and the EB are not intended for reuse after an incident.

The open front barricade consists of an aluminum frame with aluminum plates on three sides and the roof. The inside dimension is 4 feet by 4 feet by 6 feet high. The frame is designed to be assembled and disassembled in the field. The plate materials must be removed from the frame prior to relocating to the next site. The assembled frame weighs approximately 60 pounds. The maximum thickness of aluminum this frame can hold is 2.75 inches. The required thickness of aluminum is based on the most probable munition (MPM) for the site.

The enclosed barricade consists of an aluminum frame with aluminum panels on three sides, roof, canopy and front barricade. The inside dimension is 4 feet by 4 feet by 6 feet high. The frame is designed to be assembled and disassembled in the field. The plate materials must be detached prior to relocating to the next site. The assembled frame weighs approximately 120 pounds. The maximum thickness of aluminum this frame can hold is 2.75 inches. The required thickness of aluminum is based on the most probable munition (MPM) for the site.

If the weight-to-volume ratio is less than  $0.29 \text{ lbs/ft}^3$  then the minimum separation distance for unintentional detonations (MSD for unintentional detonations) to the sides and back of the OFB will be 300 ft and the MSD for unintentional detonations to the front will be determined by the MPM. Similarly, the MSD for unintentional detonations around the EB will be 300 ft for a weight-to-volume ratio less than  $0.29 \text{ lbs/ft}^3$ . For larger weight-to-volume ratios the MSD for unintentional detonations must be determined by testing or approved calculation methods.